CLAIMS

What is claimed is:

1   1.   A security device comprising:

2   a keypad/display having a plurality of code symbol

3   display positions, each for displaying any one of a plurality

4   of code symbols, the code symbols being restricted so as to

5   be viewable by a keypad/display user only when the user's

6   face is located in a particular position relative to the

7   keypad/display, the keypad/display changing the display

8   position of code symbols on each operation of the

9   keypad/display; and

10   a biometric device associated with the keypad/display

11   and capable of acquiring data from at least a portion of said

12   user's face situated in said particular region and capable of

13   performing biometric recognition of said user using said

14   data;

15   the biometric device being activated in response to or

16   in conjunction with the initiation of the entry of a code

17   responsive to the code symbols displayed.

1   2.   The security device of claim 1 wherein the

2   keypad/display comprises a plurality of manually operable

3   keys for entry of a code, each key being associated with a

4   respective code symbol display position.

1   3.   The security device of claim 1 wherein the

2   keypad/display includes a microphone and associated speech

3   recognition capability for entry of a code by recognizing a

4   spoken sequence of code symbols corresponding to the symbols

5   then being displayed in a predetermined spatial sequence of

6   code symbol display positions.

1   4.   The security device of claim 1, wherein said

2   biometric device is capable of performing facial recognition

3   of said user.

1   5.   The security device of claim 1, wherein said

2   biometric device is capable of performing retina recognition

3   of said user.

1   6.   The security device of claim 1, wherein said

2   biometric device is capable of performing iris recognition of

3   said user.

1   7.   The security device of claim 1, wherein said

2   biometric device comprises a solid state camera.

1   8.   The security device of claim 1 wherein the

2   keypad/display is rotatable about a horizontal axis to allow

3   persons of different height to conveniently view the code

4   symbols.

1   9.   The security device of claim 8 further comprising a

2   sensor sensing the angle of the keypad/display about a

3   horizontal axis to provide an additional level of user

4   recognition.

1   10.   A method of operating a security system comprising:

2   providing a keypad/display having a plurality of code

3   symbol display positions, each for displaying any one of a

4   plurality of code symbols, the code symbols being restricted

5   so as to be viewable by a keypad/display user only when the

6   user's face is located in a particular position relative to

7   the keypad/display;

8   providing an biometric device associated with the

9   keypad/display and capable of acquiring data from a portion

10   of the user's face situated in said particular region and

11   capable of performing biometric recognition of said user

12   using said data;

13   on each operation of the keypad/display, changing the

14   code symbols displayed at the code symbol display positions;

15   sensing the entry of a code by the user, and during the

16   entry of the code, initiating optical biometric device to

17   obtain data from said user's face;

18   comparing the code entered and the data taken to

19   predetermined criteria for recognition of the user.

1   11.   The method of claim 10 wherein the entry of a code

2   is sensed by sensing the actuation of manually operable keys

3   on the keypad/display, each key being associated with a

4   respective code symbol display position.

1   12.   The method of claim 10 wherein the keypad/display

2   includes a microphone, and wherein entry of a code is sensed

3   by sensing the speaking of a code sequence by a user of code

4   symbols corresponding to the symbols then being displayed in

5   a predetermined spatial sequence of code symbol display

6   positions and identifying the code spoken using speech

7   recognition techniques.

1   13.   The method of claim 10 wherein the code entered is

2   compared with predetermined criteria for recognition of the

3   user to determine the predetermined criteria to which the

4   data is then compared for recognition of the user.

1   14.   The method of claim 10 wherein comparing the data

2   taken to predetermined criteria for recognition of the user

3   is done using facial recognition techniques.

1   15.   The method of claim 10 wherein comparing the data

2   taken to predetermined criteria for recognition of the user

3   is done using retinal recognition techniques.

1   16.   The method of claim 10 wherein comparing the data

2   taken to predetermined criteria for recognition of the user

3   is done using iris recognition techniques.

1   17.   A method comprising:

2   varying spatial positions of a plurality of code symbols

3   on a keypad/display, the code symbols being viewable only

4   from a limited viewing position;

5   receiving an access code entered by a user using said

6   keypad/display;

7   comparing said access code to an authorized access code;

8   acquiring digital data from a biometric sensor sensing

9   biometric data of a persons face in the limited viewing

10   position in response to said user operating said

11   keypad/display;

12   comparing said user digital data to an authorized user

13   digital data; and

14   performing a specified function in response to said

15   access code matching said authorized access code and said

16   user digital data matching said authorized user digital data.

1   18.   The method of claim 17, wherein said authorized

2   access code is stored in a memory local to said

3   keypad/display.

1   19.   The method of claim 17, wherein said authorized

2   access code is stored in a remote memory accessible by way of

3   a network.

1   20.   The method of claim 17, wherein said authorized

2   digital data is stored in a memory local to said

3   keypad/display.

1   21.   The method of claim 17, wherein said authorized

2   digital data is stored in a remote memory accessible by way

3   of a network.

1   22.   A security device, comprising:

2   a keypad/display to visually display a plurality of code

3   symbols respectively in a plurality of spatial positions for

4   viewing from a restricted position and to enable a user to

5   enter an access code;

6   a camera to obtain digital data relating to the user;

7   and

8   one or more processors to cause:

9   a varying of the spatial positions of said code

10   symbols on said keypad/display;

11   the receipt of an access code, and initiation of

12   the camera to obtain digital data relating to the user

13   during receipt of the access code;

14   a comparison of said access code with an authorized

15   access code;

16   a comparison of the digital data with an authorized

17   user digital data; and

18   a performance of a specified function in response

19   to the access code matching the authorized access code

20   for an authorized user and the user digital data

21   matching the authorized user digital data.